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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENT MALMGREN, SHABIRA ABBAS,
BENGT WIDBERG, ASA OSTMAN, and
JEANETTE ANNERGREN

Appeal 2008-2394
Application 09/651,130
Technology Center 1700

Decided: June 30, 2008

Before EDWARD C. KIMLIN, CATHERINE Q. TIMM, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1, 2, 4-13, 15 and 20. We have jurisdiction under 35 U.S.C. § 6.¹

We AFFIRM.

¹ An Oral Hearing for this appeal was held on June 11, 2008.

BACKGROUND

Appellants claim a liquid absorbent material.

Claim 1 is illustrative:

1. A liquid absorbent material comprising an open-cell polymeric foam material comprising either polysaccharide or polypeptide, the foam material comprising a distribution of pore sizes between 0 and 3 μm , the foam material having an absorption rate at wetting of at least 0.4 ml/s for a round sample having a 50 mm diameter, a liquid distribution capacity at an inclination of 30° of at least 15 g/g, a liquid storage capacity of at least 9% measured through centrifuge retention capacity and a gel liquid absorption of at least 4 g/g measured by pore volume distribution, for synthetic urine test liquid.

The reference set forth below is relied upon by the Examiner as evidence of unpatentability:

Chen

6,261,679 B1

July 17, 2001

The Examiner rejected claims 1, 2, 4-13, 15 and 20 under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Chen.

Appellants do not separately argue with any reasonable specificity the individual claims rejected under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) (App. Br. 3-16; Reply Br. 2-4). Therefore, we select claim 1 to decide the issues on appeal.

ISSUE ON APPEAL

The issue on appeal is whether the Appellants have shown that the Examiner reversibly erred in rejecting the claims as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Chen.

OPINION

We have thoroughly reviewed each of Appellants' arguments and evidence for patentability. We agree with Appellants that the Examiner's finding of anticipation based on Chen cannot be sustained. However, we are in full agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejection under 35 U.S.C. § 103(a) for essentially those reasons expressed in the Answer and those set out herein.

The issue of anticipation

The Examiner correctly finds that Chen describes an open-cell fibrous absorbent foam structure that may be made of the same materials as Appellants' open-cell foam structure (Ans. 3-4). The Examiner also correctly finds that the process steps used in Chen may parallel the process steps disclosed by Appellants in their Specification and that the absorbent foam of Chen is designed for uses that are the same as Appellants', such as diapers, feminine care pads, etc. (*id.*). The Examiner further correctly finds that Chen discusses the use of various pore sizes and gradients of pore sizes in the absorbent material (*id.*).

The Examiner acknowledges that Chen fails to explicitly teach the claimed properties and pore size distribution as required by independent claim 1 but, based on the above-noted findings, concludes that these properties and pore size distribution would have been inherent (or alternatively obvious) in the open-cell foam of Chen (Ans. 4).

A rejection for anticipation requires, as the first step, that all the elements claimed be described in a single reference and, further, the reference must describe the claimed invention sufficiently to have placed a person of ordinary skill in possession of it. *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990). When a claimed product reasonably appears to be identical or substantially identical to a product disclosed by the prior art, the burden is on the Appellants to prove that the product of the prior art does not necessarily or inherently possess the characteristics or properties attributed to the claimed product. *See In re Best*, 562 F.2d 1252, 1255 (CCPA 1977), and *In re Spada*, 911 F.2d at 708.

Appellants contend that they have successfully rebutted any prima facie case of anticipation that exists based on Chen with the evidence they have presented in the Malmgren Declaration filed April 7, 2006² (App. Br. 6). We agree. This Declaration evidence shows that the absorbent foam material of Example 3 of Chen does not necessarily or inherently possess the claimed properties required by claim 1. We agree that Appellants have shown that Example 3 is the closest example described in Chen to their disclosed invention in terms of process and materials used, yet does not result in the claimed properties required in claim 1 (*id.*). In particular, Sample A prepared according to Example 3 appears to be the closest example to Appellants' invention. While the evidence in the Malmgren Declaration shows that the absorbent foam of Sample A did possess two of the four properties in the

² Although the Evidence section of the Appeal Brief filed January 29, 2007 contains two declarations filed by Malmgren, the only declaration relied upon in the Brief is the one filed April 7, 2006. Thus, we likewise limit our discussion to that declaration.

ranges recited in claim 1, this foam nonetheless did **not** possess two of the four properties in the ranges required by claim 1; namely, the liquid distribution capacity of at least 15 g/g and the gel liquid absorption of at least 4 g/g measured by pore volume distribution.

We are constrained by these circumstances to reverse the Examiner's § 102 rejection based on Chen.

The issue of obviousness

We agree, however, with the Examiner's conclusion that it would have been prima facie obvious for an artisan to optimize the values of the claimed properties and pore size distribution as required by representative claim 1 in the absorbent article of Chen (Ans. 3-5).

Appellants contend that Chen does not describe the pore size necessary for gel absorption (namely, pore sizes less than 3 μm)³; and that having pore sizes in this range is critical to their invention (App. Br. 8, 11). Appellants allege they have discovered a new absorbent foam which enables optimization of both the absorption rate and the liquid storage capacity (Reply Br. 3). Appellants further contend that Chen “provides no teaching or motivation... to modify Chen to incorporate gel liquid storage, or the accompanying pore size distribution between 0 and 3 μm , in an absorbent material.” (Reply Br. 4). We disagree for the following reasons.

First, we find that Chen does broadly encompass a range of pore sizes that include pores sizes as small as between 0 and 3 μm . This conclusion is

³ See Appellants' Spec., page 5, para. 4 (“Gel liquid refers to liquid held in pores smaller than 3 μm ...”).

supported by all the findings presented by the Examiner in the Answer, including Chen's teachings that:

(1) the pores (i.e., cells) can "become progressively smaller near the opposing back surface . . . [to] prevent liquid leakage from the back surface" or contain "more closed cells or smaller pores near the side edges of the absorbent fibrous structure to prevent lateral leakage of fluid" (col. 15, ll. 29-45),

(2) the cells "can be about 3 mm *or less*; . . . still more specifically about 0.1mm *or less*, and most specifically from about 0.02 mm to about 0.2 mm" (col. 42, ll. 30-38; emphasis provided).

Thus, the claimed range of pore size distribution between 0 and 3 μm lies inside the range described in Chen. Indeed, the Malmgren Declaration shows that the absorbent material of Sample A of Chen contained *some* pore sizes between 0 and 3 μm , as evidenced by the presence of some gel liquid absorption, via the measured pore volume distribution of 2.2 g/g⁴.

These teachings would have given the artisan a reasonable expectation that the pore size distribution would have been effective in the claimed range of between 0 and 3 μm , including the concomitant gel liquid absorption of greater than 4 g/g, as claimed. *See Pfizer, Inc. v. Apotex*, 480 F.3d 1348, 1364 (Fed. Cir. 2007) (the expectation of success need only be reasonable, not absolute).

Second, it has been held that where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness

⁴ "Pore volume distribution" is the gel liquid absorption which is "measured by pore volume distribution" (*see, e.g.*, claim 1 which requires a gel liquid absorption of at least 4 g/g measured by pore volume distribution).

exists. *See, e.g., In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990). As discussed above, we find that the claimed range of pore size distribution lies inside the range described in Chen, and thus, a prima facie case of obviousness exists for the claimed range.

Third, an obviousness conclusion is also supported by the well established legal principal that it would have been obvious to determine workable values for an art recognized, result effective variable. *Pfizer*, 480 F.3d at 1368; *see also In re Boesch*, 617 F.2d 272, 276 (CCPA 1980). The present record establishes that a person of ordinary skill would have recognized that various absorption properties, e.g., acquisition, distribution, and liquid storage properties, could have been used in the open cell polymeric foam material of Chen. One of ordinary skill in the art would have readily appreciated that these properties of open cell foam absorbent articles (e.g., diapers, sanitary napkins) are known result effective variables, as evidenced by Chen⁵. For this reason, an artisan would have sought to determine suitable values for these properties in the open cell polymeric absorbent foam taught by Chen. *See, e.g., In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997).

Appellants also contend that one is not taught how to manipulate the process taught in Chen to arrive at the claimed foam (App. Br. 4; Reply Br. 1). However, Appellants have failed to identify any specific process step or condition necessary to produce the claimed foam product that is not taught in Chen. Furthermore, while in a rejection based on anticipation, a

⁵ During the Oral Hearing of June 11, 2008, Appellants' representative stated that the absorption properties, including acquisition, distribution, and storage properties, are known result effective variables.

reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference[. s]uch picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the *similarity* of the subject matter which he claims to the prior art...

In re Arkley, 455 F. 2d 586, 587 (CCPA 1972).

Thus, we determine that any picking and choosing of the appropriate process steps as taught in Chen necessary in order to optimize the absorbent product described therein and its properties would have been *prima facie* obvious in view of the similarity between the product and process claimed here and the product and process described in Chen (as pointed out by the Examiner, Ans. 3-6).

It is well settled that when patentability is predicated upon a change in a condition of a prior art composition, such as a change in a known result effective variable or the like, the burden is on Appellants to establish with objective evidence that the change is critical, i.e., it leads to a new unexpected result. *Pfizer*, 480 F.3d at 1368.

Thus, the burden of proof to show non-obviousness, due to the claimed ranges of the properties and pore size distribution required by claim 1, shifts to Appellants. Appellants have proffered no such evidence here. We note that the claimed properties have not been characterized as unexpected to a person of ordinary skill in the art, rather, the properties are characterized in the Specification only as "unique" (Spec. p. 10, para. 3). While Appellants' attorney refers to these properties as unexpected (App. Br. 7), attorney

argument is no substitute for evidence. *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, 424 F.3d 1276, 1284 (Fed. Cir. 2005).

These circumstances support our determination that the product defined by claim 1 would have been obvious to one with ordinary skill in this art in view of the prior art applied by the Examiner.

CONCLUSION

The decision of the Examiner rejecting claims 1, 2, 4-13, 15 and 20 under 35 U.S.C. § 102(e) as anticipated by Chen is reversed.

The decision of the Examiner rejecting claims 1, 2, 4-13, 15 and 20 under 35 U.S.C. § 103(a) as unpatentable over Chen is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tf/ljs

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